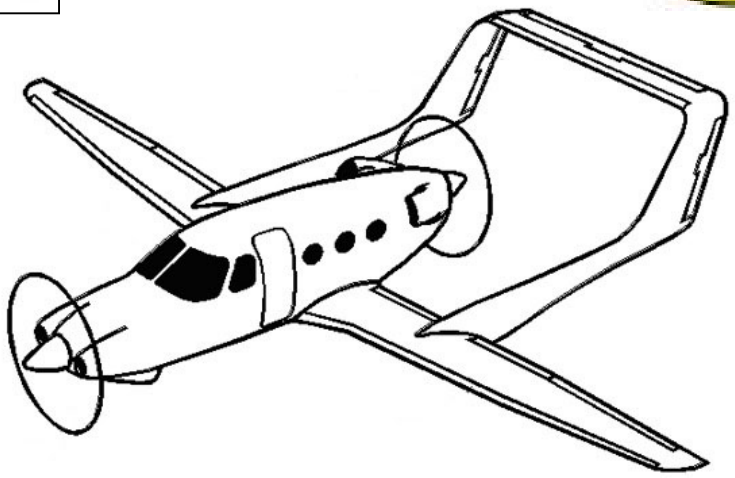

FAA Industry Training Standards (FITS)

Scenario Based Transition Syllabus and Standards

For The Adam Aircraft Industries A500

Version 1.0 March 31, 2004

Adam Aircraft-FITS A500 Transition Training Syllabus

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Acknowledgements:

The Syllabus prepared by:

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

UND AEROSPACE UNIVERSITY OF NORTH DAKOTA

ADAM AIRCRAFT

Section 1 - FITS Introduction

FAA Industry Training Standards (FITS)

The FITS Program is a joint project of the FAA sponsored Center for General Aviation Research (CGAR), Embry Riddle Aeronautical University, The University of North Dakota, and the General Aviation Industry.

FITS Mission Statement

Ensure pilots learn to safely, competently, and efficiently operate a technically advanced piston or light jet aircraft in the modern National Airspace System (NAS).

FITS Imperatives

The SAFER SKIES initiative is a commitment by the FAA and the aviation industry to significantly reduce general aviation accidents—the majority of which (75%) are pilot error related. Compounding the challenge of this initiative is the emergence of a new class of technically advanced general aviation aircraft that offers significant improvements in performance and capability. These innovative aircraft are equipped with automated cockpits and cruising speeds that require flight management and decision-making skills normally expected from ATP-level pilots; yet they will be flown by pilots with significantly lower qualification and experience levels. It is imperative that a new training philosophy be implemented that reduces the human error element and accelerates acquisition of higher-level judgment and decision-making skills.

FITS training recognizes the wide variety of advanced technology systems and the different combinations and permutations of these systems as compared to the relatively similar layout of the conventional cockpits they replace.

- Within a type of system (e.g. different operations of GPS navigators)
- Within categories of advanced technology systems
    - Pilot Flight Displays (PFD)
    - Multi Function Displays (MFD)
    - Traffic Displays
    - Weather displays
    - Terrain Displays
    - Autopilots

FITS Training Goals

It is imperative to provide pilots of Technically Advanced Aircraft (TAA) with the best possible training in the following areas:

- Higher Order Thinking
    - Aeronautical Decision Making
    - Situational Awareness
    - Pattern Recognition and Decision Making
- Automation Competence
- Planning and Execution
- Procedural Knowledge
- Psychomotor Skills

Section 2 - FITS Terminology and Definitions

Key Terms

***Technically Advanced Aircraft (TAA)* –** A General Aviation aircraft that combines some or all of the following design features; advanced cockpit automation system (Moving Map GPS/ Glass Cockpit) for IFR/VFR flight operations, automated engine and systems management, and integrated auto flight/autopilot systems.

***Light Turbine TAA* –** a jet or turboprop aircraft weighing 12,500 lbs or less and equipped with cabin pressurization, and conventional (non-swept) wings. This aircraft contains all the features of a Technically Advanced Aircraft and will be capable of operating in Class A airspace on normal mission profiles. A Light Jet TAA will be certified for Single-Pilot operation. (Note: Light TAA's are specifically defined as non-swept wing due to the significantly increased training load incurred when transitioning pilots to swept wing aircraft)

***Scenario Based Training (SBT)* –** SBT is a training system that uses a highly structured script of real-world experiences to address flight training objectives in an operational environment. Such training can include initial training, transition training, upgrade training, recurrent training, and special training.

***Single Pilot Resource Management (SRM)* –** The art and science of managing all the resources (both on-board the aircraft and from outside sources) available to a single-pilot (prior and during flight) to ensure that the successful outcome of the flight is never in doubt. The primary emphasis will be on integrating the developing and enhancement of mental process and underlying thinking skills needed by the pilot to consistently determine the best course of action in response to a given set of circumstances.

Related Terms and Abbreviations

***Aircraft Automation Management* –** The ability to control and navigate an aircraft by means of the automated systems installed in the aircraft.

Automated Navigation Leg – A flight of 30 minutes or more conducted between two separate airports in which the aircraft is controlled primarily by the autopilot and the on board navigation systems.

> A ***VFR Automated Navigation Leg*** is flown on autopilot from 1,000 ft AGL on the departure until entry to the VFR traffic pattern.
>
> An ***IFR Automated Navigation Leg*** is flown on autopilot from 500 ft AGL on departure until reaching the decision altitude (coupled ILS approach) or missed approach point (autopilot aided non-precision approach) on the instrument approach. If a missed approach is flown it will be flown using the autopilot and on-board navigation systems.

***Automation Competence* –** The ability to understand and operate the automated systems installed in the aircraft.

Automation Surprise **–** The characteristic of automated systems to provide different types and varieties of cues to pilots compared to the analog systems they replace, especially in time critical situations.

Automation Bias **–** The relative willingness of the pilot to trust and utilize automated systems.

Candidate Assessment **–** A system of critical thinking and skill evaluations designed to assess a training candidates readiness to begin training at the required level.

Critical Safety Tasks/Event **–** Those mission related tasks and or events that if not accomplished quickly and accurately may result in damage to the aircraft or loss of life.

Data Link Situational Awareness Systems – Systems that feed real-time information to the cockpit on weather, traffic, terrain, and flight planning. This information may be displayed on the PFD, MFD, or on other related cockpit displays.

Learner Centered Grading - Desired Pilot in Training (PT) Scenario Outcomes – The object of scenario-based training is a change in the thought processes, habits, and behaviors of the PTs during the planning and execution of the scenario. Since the training is learner-centered the success of the training is measured in the following desired PT outcomes:

- ***Describe*** – At the completion of the scenario the PT will be able to describe the physical characteristics and cognitive elements of the scenario activities.
- ***Explain*** – At the completion of the scenario the PT will be able to describe the scenario activity and understand the underlying concepts, principles, and procedures that comprise the activity.
- ***Practice*** – At the completion of the scenario the PT will be able to practice the scenario activity with little input from the CFI. The PT with coaching and/or assistance from the CFI will quickly correct minor deviations and errors identified by the CFI.
- ***Perform*** **–** At the completion of the scenario, the PT will be able to perform the activity without assistance from the CFI. Errors and deviations will be identified and corrected by the PT in an expeditious manner. At no time will the successful completion of the activity be in doubt. "***Perform"*** will be used to signify that the PT is satisfactorily demonstrating proficiency in traditional piloting, systems operation skills and aeronautical decision making.
- ***Manage/Decide*** **–** At the completion of the scenario, the PT will be able to correctly gather the most important data available both within and outside the cockpit, identify possible courses of action, evaluate the risk inherent in each course of action, and make the appropriate decision. **"*Manage/Decide"*** will be used to signify that the PT is satisfactorily demonstrating acceptable SRM skills including aeronautical decision making.

Emergency Escape Maneuver **–** A maneuver (or series of maneuvers) performed manually or with the aid of the aircraft's automated systems that will allow a pilot to

successfully escape from an inadvertent encounter with Instrument Meteorological Conditions (IMC) or other life-threatening situations.

Mission Related Tasks **–** Those tasks required for the safe and effective accomplishment of the mission(s) that the aircraft is capable of and required to conduct.

Multi-Function Display MFD – Any display that combines navigation, aircraft systems, and situational awareness information onto a single electronic display.

Primary Flight Display (PFD) – Any display that combines the primary six flight instruments, plus other related navigation and situational awareness information, into a single electronic display.

Proficiency Based Qualification **–** Aviation task qualification based on demonstrated performance rather than other flight time or experience qualifiers.

Simulation **–** Any use of animation and/or actual representations of aircraft systems to simulate the flight environment. PT interaction with the simulation and task fidelity for the task to be performed are considered the requirements for effective simulation.

Training Only Tasks **–** Training maneuvers that, while valuable to the PT's ability to understand and perform a mission related task, are not required for the PT to demonstrate proficiency. However, instructor pilots will be required to demonstrate proficiency in Training Only Tasks.

Section 3 - FITS TAA Training Philosophy

FITS TAA Training is a new approach to training pilots which is scenario based rather than maneuver based and structured to emphasize development of critical thinking and flight management skills. The goal of this new training philosophy is accelerated acquisition of the higher level decision-making skills necessary to prevent pilot error accidents in Technically Advanced Aircraft (TAA).

Background

Previous training philosophy assumed that newly certificated pilots would generally remain in the local area until recently acquired aviation skills are refined. This is no longer true with the advent of Technically Advanced Aircraft (TAA). Offering superior avionics and performance capabilities, these aircraft travel faster and further than their predecessors. As a result, a growing number of entry-level pilots suddenly have the capability of long distance high speed and altitude travel—and its incumbent challenges. Flights of this nature routinely span diverse weather systems and topography requiring advanced flight planning and execution skills. Advanced cockpits and avionics, while generally considered enhancements, require increased technical knowledge and finely-tuned automation competence. Without these skills, the potential for increased human-error accidents is daunting. A new method of training is required that accelerates acquisition of these skills during the training process.

Research has proven that learning is enhanced when training is realistic and authentic. In addition, the underlying skills needed to make good judgments and decisions are teachable. Both the military and commercial airlines have embraced these principles through integration of Line Oriented Flight Training (LOFT) and Cockpit Resource Management (CRM) training into their qualification programs. Both LOFT and CRM lessons mimic real-life scenarios as a means to expose trainees to realistic operations and critical decision-making opportunities. The most significant shift in these programs has been to move away from traditional maneuver-based training to incorporate training that is scenario-based.

Maneuver-based training puts emphasis on the mastery of individual tasks or elements. Completion standards are driven by regulation, as well as Practical Test Standards, that use flight hours and the ability to fly within plus or minus some specified tolerance as the measurement of competence. The emphasis is on development of motor skills to satisfactorily accomplish individual maneuvers. Only limited emphasis is placed on decision-making, and as a result, when the newly trained pilot goes on to fly in the real-world environment, he or she is inadequately prepared to make crucial decisions unassisted.

Scenario Based Training (SBT) and Single Pilot Resource Management (SRM) are similar to LOFT and CRM training but tailored to the TAA pilot's needs. They use the same individual tasks as Maneuver Based Training, but arrange or script them into scenarios that mimic real-life TAA cross-country travel. By emphasizing on each lesson that the goal is getting to a destination safely, the trainee readily correlates the importance of individual training maneuvers to safe mission accomplishment. In

addition, throughout the scenario, the instructor poses “What If?” discussions as a means to provide the trainee with increased exposure to proper decision-making. Because the “What If?” discussions are in reference to the scenario, there is a vivid connection between decisions made and the final outcome.

The “What If?” discussions are designed to accelerate development of decision-making skills by posing situations for the trainee to ponder. Once again, research has shown that these types of discussions help build judgment and offset low experience.

Questions or situations posed by the instructor must be somewhat open-ended (rather than requiring only rote or one-line responses.) In addition, the instructor guides the trainee through the decision process by:

1. Posing a question or situation that engages the trainee in some form of decision-making activity.
2. Examining the decisions made.
3. Exploring other ways to solve the problem.
4. Evaluating which way is best.

For example, when the trainee is given a simulated engine failure, the instructor might ask questions like:

“What should we do now?” Or, ”Why did you pick that place to land? Is there a better choice? Which place is the safest? Why?”

Questions of this nature force the trainee to focus on the decision process, which accelerates acquisition of judgment. Judgment, after all, is simply the decision-making process, which is learned primarily from experience. It is not innate. All life experiences mold the judgment tendencies brought into flight situations. By artificially injecting decision opportunities into routine training lessons, we speed-up acquisition of experience, and thus enhance judgment and decision-making. For further information, please reference “Aeronautical Decision Making” in the FAA Aviation Instructor Handbook.

Section 4 - Adam Aircraft-FITS Transition Syllabus

This document is a general outline of the items to be included in the ground and flight training of pilots transitioning into the Adam Aircraft Industries A500.

Goal

The goal of Transition Training is to prevent accidents by ensuring pilots have proper training in the specified systems and operating characteristics of their aircraft. Transition Training, therefore, concentrates on areas unique to the A500. No attempt is made to review general piloting knowledge or skills common to any airplane. Instruction in these areas is highly beneficial, but should be accomplished through other means.

A500 Transition Course Prerequisites

To enroll in the A500 Transition Course the pilot must have at least a private pilot certificate with an instrument rating or an ATP certificate. Additionally the pilot must have completed an Instrument Proficiency Check (IPC) as described in Title 14 of the Code of Federal Regulations (14 CFR) section 61.57 within the 3 months prior to attending A500 Transition Training. If the pilot is unable to meet this requirement, arrangements must be made to complete an IPC while attending the A500 Transition Course.

Course Elements

SBT represents a non-traditional approach to training. The most significant shift is the move away from the traditional practice of simple maneuver-based training and repetition. SBT uses the same maneuvers, but scripts them into realistic training experiences. Practice of the task remains the cornerstone of skill acquisition, but the shift is away from meaningless drill/repetition in the practice area toward meaningful application as a part of a normal flight activity. The goal of SBT is to teach the PT “how to think and make decisions” as early as possible in the flight training process.

This syllabus utilizes some maneuver-based instruction, mainly in approach and landing training, however the emphasis is on SBT. It also provides a coordinated ground/flight sequence of training so that academic support materials are covered before the associated flight lessons. Additionally, the simple-to-complex building-block approach is maintained. Each lesson increases in complexity and the PT is provided the opportunity to practice the maneuver in a real-world flight experience. However, it goes well beyond the current training philosophy by placing the PT in a realistic environment. This demands analysis and decision-making from the first academic class to the final checkride, and the flight mentoring that follows.

Standards

Several training items require a discussion of airplane component or system limitations. In every airplane system there are limitations based on two factors:

1. The absolute capability of the equipment to perform a particular function and;
2. The individual pilot’s ability to use that equipment.

Effective training and experience enables the safe operation of an airplane within these limitations. Some airplane systems are more complex and require a higher level of skill and interpretation. Pilot skills and knowledge vary with a pilot's total flight time, time-in-type, and recent flight training or experience. Pilots must therefore be trained to recognize their personal limitations as well as those of the airplane.

Throughout the ground school and flight curriculum, emphasis will be placed on operating within airplane and pilot limitations. Risk management and decision-making skills (also referred to as Single Pilot Resource Management (SRM)) are consistently integrated into each scenario. A discussion of limitations, as they apply to the pilot's experience level, and with reference to potential problem areas, will enhance the decision process. Transition Training Guides include discussions of system limitations, flight characteristics of the specific airplane, and how these items apply to a particular pilot.

Ground Training

The ground-based segments of the syllabus are an integral part of the SBT course and should be integrated into the flight training experience. The pilot-in-training (PT) should demonstrate, through written and oral review, the knowledge to safely operate the A500, using the Pilot's Operating Handbook, the Pilot's Training Manual, airplane checklists and other material. All time critical emergency procedures must be committed to memory. The Instructor will discuss each incorrect response with the pilot to ensure complete understanding and the reasons why their responses were incorrect. The instructor must integrate SRM concepts and techniques in each of these discussions.

The basic structure of thinking skills training is to engage the learner in a task or in solving a problem, ask the learner to reflect on the mental process used to solve the task or problem, consider other ways the task or problem could have been solved, and then consider which way was better or best. A discussion of why one method is or may be better than another will help the learner build better problem-solving strategies.

Flight Training

Each flight training lesson consists of a scripted scenario. These scenarios increase in complexity as the PT progresses through the course. The instructor and PT should use the scenario as a lesson plan. The intent is for the PT to study the lesson script, prepare a scenario plan, and brief it as part of the preflight preparation.

It is vitally important that the PT learn to "manage" the aircraft in the automated mode, as well as fly the aircraft by hand. Good SRM demands that the PT be able to rely on the autopilot and automated navigation systems during times of high cockpit task loads. Instructors must ensure that emphasis is given to both automated and manual flight modes as described in each scenario.

The pilot-in-training should demonstrate the necessary skill and experience required for the safe operation of the A500. Operations must be accomplished within the tolerances specified in the Practical Test Standards appropriate to the pilot's airmen certificate.

Scenario Development

Scenario development is the key to the FITS transition syllabus. The PT ideally conducts scenario planning with little assistance from the instructor. The instructor, with guidance from the syllabus, will act as a mentor and assist in establishing boundaries for the scenario and how to guide the planning process. This ensures that learning outcomes are achieved in an orderly and efficient manner.

The PT and the Instructor will discuss the lesson syllabus and decide (in advance) the most likely destination for the scenario. The PT must have the prior knowledge, flight proficiency, and experience with the TAA to be able to concentrate on the transition training. If the instructor determines that the PT is not demonstrating this level of competency, the instructor should discontinue the transition training until it is achieved. Proficiency must be developed during each segment of the syllabus to allow the PT to proceed to the next lesson.

The instructor must become completely versed in all the automated features of the aircraft and must be able to instruct PT's in their proper and appropriate use. Failure to completely master and trust cockpit automation will severely reduce the effectiveness of TAA training.

Instructor / PT Responsibilities

Pre-Scenario Planning - For Scenario Based Instruction to be effective; it is vital that the PT and instructor communicate well in advance of the training session. The instructor should communicate the following information in order that the PT can plan accordingly:

- Scenario destination(s)
- Desired PT learning outcomes
- Desired level of PT performance
- Desired level of automation use
- Possible in-flight scenario changes (during later stages of the program no pre-flight notification is required)

When a PT is conducting the transition syllabus, the instructor should make the situation as realistic as possible. The PT will know the mission parameters in advance of the flight. While the actual flight may deviate from the original plan, it allows the PT to be placed in a realistic scenario, and provides a frame of reference for all follow on actions and decisions.

Scenario Planning – Before the flight, the instructor will propose the scenario to be planned. After discussion with the instructor, the PT will plan the flight to include:

- Route
- Destination(s)
- Weather
- NOTAMS
- Desired PT learning outcomes

- Possible alternate scenarios and emergency procedures

Pre-Flight Briefing – The PT will brief the instructor on the flight scenario, which will include:

- Route, weather, and NOTAMS
- Accomplishment of desired training outcomes
- Emergency procedures and alternate scenarios
- SRM considerations (see the SRM outcomes list in section 5)
- Safety considerations

In-Flight – The PT will execute the scenario plan with minimal intervention from the instructor. The instructor should provide scenarios that allow the PT to be exposed to the differences of the TAA aircraft while exercising critical thinking skills. For example, the instructor may create a situation that requires the PT to divert. In doing so, the PT should utilize TAA automated systems and critical thinking skills to determine the best course of action.

Post-Flight – The post-flight review should be a dialogue between the PT and the instructor critiquing the flight scenario. Typically, the discussion should be led by the PT "self-critiquing" and the instructor "enabling" the PT to solve the problems and drawing conclusions. Based on this analysis, the PT and instructor should discuss methods and alternatives for improvement. This will also include those items considered successful. This step is critical in the development of higher order thinking and decision-making skills.

In the beginning, the instructor may take a leading role in the post-flight review demonstrating to the PT the proper method to conduct the post-flight; however, it is vital that the PT learn to identify performance deficiencies, problem solve and administer corrective actions independently.

Grading and Evaluation

It is important that the PT and instructor understand that the object of scenario-based training in the transition training course is to cause a change in the thought processes, habits, and behaviors of the PT.

The A500 transition-training syllabus is learner centered. It is important that the PT understands the success of the transition-training syllabus is measured in the desired PT outcomes list below. These desired outcomes are not based on the traditional standards. Instead, they are based on the knowledge and skill level of the PT:

The grading and evaluation of flight performance shall be based on the appropriate FAA Practical Test Standards using the Desired PT Scenario Outcomes defined in Section 1. PT performance shall be graded and evaluated as: PROFICIENT, NORMAL PROGRESS or ADDITIONAL TRAINING REQUIRED. The criteria for evaluation shall be as follows:

- PROFICIENT (1) – Based on the Desired PT Scenario Outcomes defined in Section 1, a grade of PROFICIENT (1) will be awarded when the PT in training attains the level of ***Perform*** or ***Manage-Decide***. ***Perform*** is used to describe proficiency in a skill item such as an approach or landing. ***Manage-Decide*** is used to describe proficiency in an SRM area such as ADM. (Note: a grade of **Explain** may be used to signify proficiency in an event which is not performed in the aircraft due to safety considerations)
- NORMAL PROGRESS (2) – Based on the Desired PT Scenario Outcomes defined in Section 1, a grade of NORMAL PROGRESS (2) will be awarded when the PT attains the level of performance below proficiency that is required for the individual training scenario. ***Describe***, ***Explain*** and ***Practice*** are used to describe PT learning levels below proficiency in both skill items and SRM areas.
- ADDITIONAL TRAINING REQUIRED (3) – Based on the Desired PT Scenario Outcomes defined in Section 1, a grade of ADDITIONAL TRAINING REQUIRED will be given when the PT fails to attain the level of performance that is required for the individual training scenario.

In order to complete any pilot training course, the client must attain a grade of Proficient (1) in all areas of training. Any maneuver or procedure completed with less than a Proficient grade (1) must be repeated until a grade of 1 is attained before the client can satisfactorily complete the course.

The standards for course completion for a pilot course requiring the issuance of an Airline Transport Pilot (ATP) Certificate are found in the FAA's *Airline Transport Pilot and Type Rating Practical Test Standards*.

The standards for course completion for a pilot course not requiring the issuance of an Airline Transport Pilot (ATP) Certificate are those found in the FAA's *Instrument Rating Practical Test Standards.*

Section 5 – A500/FITS Scenario Guide

Pre Training Survey

Before arrival the prospective PT will submit a written questionnaire to the training manager. Sufficient information about pilot qualifications should be included in the questionnaire to allow tailoring of the training to individual needs. For many this training program will be their first experience in a TAA. Flying single pilot IFR in faster, complex TAA require good instrument skills, excellent systems knowledge, and an ability to think and plan faster pace. Simple volume of flight experience and training may not be as important as the type and quality.

Information pertaining to the computer literacy of the PT will prove valuable in providing the most effective training experience possible. SRM requires resource management skills that may have been learned in other endeavors. The pre-training survey will attempt to capture as much of this data as possible in a concise way.

Pre Arrival Academics

Since many pilots encountering their first TAA do not have the necessary background knowledge, it is important this material be presented to the pilot for his/her study prior to entry into the A500 training program.

The following is a partial list of academic training topics that may be presented on-line or by CD. Since little instructor supervision is available, this training will be limited to basic knowledge.

1. Cockpit Integration
    a. PFD/AHRS
    b. MFD
        i. Datalink Situational Awareness Systems (Weather, Traffic, Terrain)
        ii. Systems and Navigation Displays
        iii. Checklist Integration
2. Communication, Navigation, and Surveillance Systems (CNS)
    a. VHF Communication Systems
    b. GPS
    c. VOR/DME
3. Electrical System
4. Hydraulic System
5. Fuel System
6. Environmental Systems (Air Conditioning and Pressurization)
7. Landing Gear, Flaps, and Flight Controls
8. Engines
9. Performance data, Weight and Balance, and Flight planning
10. High Altitude Navigation, Airspace, and Air Traffic Control Procedures
11. High Altitude Physiology

Pre Factory Enrichment Training

Enrichment training in the A500 is designed to accelerate the PT's progress toward successfully completing the A500 transition-training course. Scenarios and maneuvers will be added or eliminated as needed to train the PT to the practical test standards.

The primary focus of this training is to reinforce the basic instrument skills required to fly the A500 and introduce cockpit automation to the PT with little or no TAA experience.

PTs will be evaluated on their instrument, automation adaptability, and decision-making skills.

On Site Ground Training

Ground Training in the A500 will be conducted through a series of learning modules. The following subjects will be covered:

1. Cockpit Integration
2. PFD/AHRS
3. MFD
4. Datalink Situational Awareness Systems (Weather, Traffic, Terrain)
5. Systems and Navigation Displays
6. Checklist Integration
7. Communication, Navigation, and Surveillance Systems (CNS)
8. VHF Communication Systems
9. GPS
10. VOR/DME/NDB
11. Electrical System
12. Hydraulic System
13. Fuel System
14. Environmental Systems (Air Conditioning and Pressurization)
15. Landing gear, Flaps, and Flight Controls
16. Engines
17. Performance data, Weight and Balance, and Flight planning
18. High Altitude Weather and Radar
19. Emergency Procedures
20. Single Pilot Resource Management
21. High Altitude Physiology
22. High Altitude Navigation, Airspace, and Air traffic Control Procedures

Module Segments

Each module will consist of the following three segments:

Segment One:

A review of pre-arrival training materials in a guided discussion format will be conducted. The purpose of segment one is to review pertinent material and to prepare the PTs for the new information provided in segment two. Since most pre-arrival training is conceptual in nature, the evaluation of the PT's progress will be at that level.

While a guided discussion is preferred, Computer Based Training (CBT) or other means that allow the instructor to determine PT preparedness level may be substituted.

Segment Two:

Guided Discussion of the appropriate technical specifications, operational limitations, and normal and emergency procedures for a given subject, aircraft system or group of systems. This segment will focus on information about the aircraft that is useful and controllable by the PT. Special emphasis will be placed on automated systems

While lecture/ discussion is preferred, CBT or other means that allow the instructor to determine PT preparedness level may be substituted

Segment Three:

This segment combines SRM skills with the systems knowledge gained during segment one and two ***(and during all previous learning modules).*** During this segment the instructor presents a selected PT with an actual pre-flight or inflight scenario and expects the PT to lead a discussion of the solution with a group composed of three to four other PTs and an instructor. The PT leading the discussion is expected to identify all the actions required to safely operate the systems, handle any emergencies that are presented, and recover the aircraft safely.

The instructor will not let the scenario end until all the steps required to complete the scenario to a safe landing are completed. Attention to detail is very important and the instructor should increase the complexity of the scenario and the completeness of detail in the PT's response as the academic phase progresses.

Whenever possible, cockpit and system diagrams, computer simulations and Aviation Training Devices (ATDs) will be employed to create the realism required.

The instructor controls the scenario by role-playing as an air traffic controller and by the timing and complexity of scenario inputs. The instructor will control the scenario so that strong personalities do not dominate the group discussion. Basic SRM concepts must be identified by the instructor and employed throughout the training scenarios.

LESSON 1 – Introduction To The A500

Objective

The Pilot in Training (PT) will demonstrate a basic knowledge and proficiency in avionics and aircraft system equipment location and normal operating procedures in the A500.

Prerequisites

1. Completion of the pre-training packet corrected to 100%.
2. Completion of a quiz covering Single Pilot Resource Management (SRM), normal operating procedures, aircraft systems and avionics corrected to 100%

PT Preparation

Review the following:

1. Normal operating procedures in the Pilot's Operating Handbook (POH)
2. A worksheet on systems and procedures
3. Airport information for departure and destination airports.
4. Route of flight information.
5. Aircraft and avionics systems display and procedures.
6. Complete Personal and Weather Risk Assessment

Briefing Items

INITIAL INTRODUCTION:

PTs should have a clear understanding of the Pilot in Command concept and how command is transferred. This should include a detailed pre-takeoff briefing procedure and format.

SINGLE PILOT RESOURCE MANAGEMENT (SRM)

1. Basic pre-flight and in-flight task management, automation management, risk management and aeronautical decision-making, situational awareness and controlled flight into terrain awareness.
2. Review Personal and Weather Risk Assessment.

SAFETY

The following safety items should be briefed to all PT's

1. Mid-air collision avoidance procedures that include the use of ATC flight following and on-board equipment, if available.
2. Taxi procedures that includes runway incursion avoidance techniques
3. Use of flight plans
4. Exchange of aircraft controls procedure between the PT and instructor, especially in the case of an actual emergency
5. Review of phraseology/terminology (especially pertaining to the use of systems such as flaps, landing gear, engine controls, pressurization controls, etc. Example- "Retract/Raise Flaps" not "Dump Flaps")

Preflight
The PT will plan a short VFR cross-country flight of approximately one hour in duration. This will include a full-stop landing at an airport other than the departure airport, and return to the airport of origin.

The PT will perform all weight and balance as well as performance calculations, and describe his/her approach to management of the specific risks involved in this flight. The Instructor will provide the necessary guidance to ensure the plan provides for all the scenario activities and sub-activities listed for this lesson. The PT is evaluated on the ability to plan a comprehensive flight with attention to all the required scenario activities.

The PT will perform all preflight procedures, engine start-up, avionics set-up, taxi and before-takeoff procedures for each leg of the scenario. This will include GPS flight plan programming for the flight as well as MFD and PFD setup and an effective pre-takeoff briefing.

These Preflight activities will be accomplished prior to takeoff for each leg of the flight.

Leg 1
The PT will perform a normal takeoff and departure to a safe altitude. When established in the departure the autopilot will be engaged. Climbing turns will be performed during the departure with a transition to VFR cruise. Aircraft systems, avionics and autopilot functions will all be practiced during cruise, descent and normal landing phase of the flight. The VNAV function will be used for the descent and a coupled ILS approach will be executed by the PT. Experience has shown this first autopilot leg should be kept very simple to allow the PT to get more comfortable with cockpit automation.

Leg 2
A different route will be programmed into the GPS flight plan for the return trip and an actual or simulated crosswind takeoff will be performed. After the aircraft is established in cruise the autopilot will be disengaged and the flight continued in the manual mode with continued practice of aircraft systems and avionics. Airspeed and configuration changes are also practiced during cruise. At some point on the return trip the flight will proceed to a designated “practice” area to accomplish steep turns, slow flight, the stall recognition and recovery series, and unusual attitude recovery.

The PT will use the GPS direct function to proceed to the destination and will perform a manual descent and transition to a manual ILS approach with a go-around and a crosswind landing.

Post-flight
The PT will perform all aircraft shutdown and securing procedures.

Scenario One

(note: these activities will be completed as part of the training scenario and are not intended to be a list of training tasks to be completed in numerical order)

Scenario Activities	*Scenario Sub Activities*	*Desired PT Scenario Outcome*
Flight Planning	1. Scenario Planning 2. Weight and Balance and Aircraft Performance Calculations 3. Preflight SRM Briefing 4. Decision Making and Risk Management	1. Describe 2. Describe 3. Practice 4. Describe
Normal Preflight and Cockpit Procedures	1. External Inspection 2. Internal Inspection 3. PFD/MFD/GPS/Autopilot Programming 4. SRM	1. Practice 2. Practice 3. Describe 4. Describe
Powerplant Start	1. Normal 2. External Power 3. Flooded Start 4. Hot Start	1. Practice 2. N/A 3. N/A 4. Describe
Start Malfunctions	1. Low Oil Pressure 2. Starter Engaged	1. N/A 2. N/A
Taxiing	1. Flight Instruments 2. SRM	1. Describe 2. Describe
Before Takeoff Checks	1. Alternators 2. Magnetos 3. Propellers 4. Trim/Autopilot 5. Pressurization 6. Ice Protection 7. Avionics Setup 8. SRM	1. Practice 2. Practice 3. Practice 4. Practice 5. Practice 6. Practice 7. Practice 8. Describe
Takeoff	1. Normal/Visual 2. Instrument 3. Aborted Takeoff 4. Crosswind 5. Maximum Performance 6. Instrument Departure Procedure (DP) 7. SRM	1. Practice 2. N/A 3. N/A 4. Practice 5. N/A 6. N/A 7. Describe
Climb Procedures	1. Automated climb 2. Manual climb 3. Navigation Programming 4. Power Management 5. SRM	1. Practice 2. Practice 3. Practice 4. Practice 5. Describe
Cruise Procedures	1. Fuel Management 2. Best Economy vs. Best Power 3. Manual Cruise 4. Autopilot Cruise 5. Navigation Programming 6. Automated navigation leg 7. SRM	1. Practice 2. Describe 3. Practice 4. Practice 5. Practice 6. Practice 7. Describe
Control Performance Instrument/Visual Crosscheck	1. Straight and Level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns	1. Practice 2. Practice 3. Practice 4. Practice
Low Speed Envelope	1. Configuration Changes	1. Practice

	2. Slow Flight 3. Approach to Stalls 4. Recovery from Autopilot Induced Stall 5. SRM	2. Practice 3. Practice 4. Describe 5. Describe
Descent Planning and Execution	1. Vertical Navigation (VNAV) Planning 2. Navigation Programming 3. Manual Descent 4. Autopilot Descent 5. SRM	1. Describe 2. Practice 3. Practice 4. Practice 5. Describe
Landings	1. Before Landing Procedures 2. IFR Landing Transition 3. Normal Landing 4. Maximum Performance Landing 5. Partial Flap Landing 6. Zero Flap Landing 7. Crosswind Landing 8. Traffic Pattern 9. Balked Landing and Go-Around 10. SRM	1. Describe 2. N/A 3. Practice 4. N/A 5. N/A 6. N/A 7. Practice 8. Practice 9. Practice 10. Describe
Aircraft Shutdown and Securing Procedures	1. Aircraft Shutdown and Securing 2. Aircraft Towing, Ground Handling and Tie-down	1. Practice 2. Practice
Automated Avionics Operation and Systems Interface	1. Primary Flight Display 2. Multi Function Display-Normal Operation 3. EHSI Operation	1. Describe 2. Describe 3. Describe
Systems Management	1. Powerplant 2. Fuel 3. Electrical 4. Avionics/GPS Systems 5. Autopilot 6. Landing Gear 7. Ice Protection 8. Pressurization 9. Oxygen 10. SRM	1. Practice 2. Practice 3. Practice 4. Practice 5. Practice 6. Practice 7. Practice 8. Practice 9. Practice 10. Describe
Navigation		
VOR	1. Tracking 2. Holding 3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. DME Arc 8. SRM	1. Practice 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A 8. N/A
ILS	1. Normal/Manual 2. Single Engine 3. Autopilot Coupled Approach 4. Circling Approach 5. SRM	1. Practice 2. N/A 3. N/A 4. N/A 5. Describe
Localizer	1. Normal/Manual Approach 2. Single Engine 3. Back Course 4. Autopilot Coupled 5. Circling Approach 6. SRM	1. Practice 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A
GPS	1. Enroute 2. Holding	1. Practice 2. N/A

	3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. SRM	3. N/A 4. N/A 5. N/A 6. N/A 7. Describe
Missed Approach	1. From Precision 2. From Non-Precision 3. From Circle 4. Single Engine 5. Use of Navaids 6. SRM	1. Practice 2. N/A 3. N/A 4. N/A 5. N/A 6. Describe
Abnormal and Emergency Procedures		
Powerplant	1. Engine Fail Before Rotation 2. Engine Fail After Rotation 3. Inflight Fail/Troubleshoot 4. Engine Securing 5. Single Engine Maneuvering 6. Best Glide Speed 7. Engine Fire In Flight 8. Propeller Overspeed 9. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A 8. N/A 9. N/A
Electrical	1. Alternator Fail 2. Electrical Fire 3. Battery Only Operations 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Fuel	1. Engine Driven Fuel Pump Failure 2. Crossflow 3. SRM	1. N/A 2. N/A 3. N/A
Landing Gear	1. Unsafe Gear Indication 2. Emergency Extension 3. SRM	1. N/A 2. N/A 3. N/A
Flight Controls	1. Unscheduled Trim 2. Autopilot Failure 3. Flap Malfunction 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Pressurization	1. Rapid Decompression 2. Door Seal 3. Emergency Descent 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Flight Instruments	1. ADI Failure 2. HSI Failure 3. Airspeed Failure 4. Static System Blockage 5. Unusual Attitude Recovery 6. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A
Avionics	1. Communication Failure 2. Glide Slope Failure 3. PDF Failure 4. MFD Failure 5. GPS Failure 6. NAV ½ Failure 7. Smoke Removal 8. Ice Protection 9. Emergency Evacuation 10. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A 8. N/A 9. N/A 10. N/A
Airmanship and Special Emphasis Items		
Airmanship	1. Aircraft Control	1. Practice

	2. Checklist/Memory Items 3. Smoothness In Handling 4. Conduct In Emergencies 5. SRM	2. Practice 3. Practice 4. N/A 5. Describe
Special Emphasis Items	1. Collision Avoidance 2. Wake Turbulence Avoidance 3. LAHSO 4. Communication Management 5. Runway Incursion Awareness 6. Windshear 7. SRM	1. Practice 2. Describe 3. Describe 4. Practice 5. Describe 6. Describe 7. Describe

LESSON 2 – IFR In The A500

Objective

The PT will plan a flight to allow the practice of skills introduced in Lesson 1. He or she will safely and efficiently demonstrate high performance maneuvers in the A500. The training flight will be conducted under simulated IFR conditions.

Prerequisites

1. Completion of a Worksheet on aircraft Systems
2. Completion of a Progress Quiz on the material to be covered
3. Completion of a Worksheet on Weight & Balance

PT Preparation

1. Review previous lesson
2. Review normal and emergency procedures in the POH
3. Plan flight profile using the scenario assigned by instructor.
4. Complete Personal and Weather Risk Assessment

Briefing Items

INITIAL INTRODUCTION:

1. Review Personal and Weather Risk Assessment
2. Discuss flight profile

SRM

1. Decision-making, risk management, situational awareness and controlled flight into terrain awareness.
2. Automation and task management
3. Filing an IFR flight plan

SAFETY

1. Mid-air collision avoidance procedures
2. Appropriate NOTAMS
3. Airport diagrams and taxi procedures, Runway Incursion Avoidance procedures
4. Emergency procedures

Preflight

The PT will plan an instrument cross-country flight with a return to the home airport after landings at 3 other airports. This flight should consist of 4 legs with a full-stop landing after each leg.

The PT will plan the flight profile and perform all preflight procedures, engine start-up, avionics set-up, taxi and before takeoff procedures. This will be accomplished prior to takeoff for each leg of the flight. Runway incursions, high wind taxi situations and abnormal indications and corrective actions are introduced and practiced. The PT will perform all radio communications for the flight.

Leg 1
The PT will perform a normal takeoff and departure to a safe altitude. When established in the departure the autopilot will be engaged. Climbing turns and transition to cruise are practiced. Aircraft systems, avionics and autopilot functions are practiced during cruise, descent and normal landing phase of the flight. Use of GPS navigation and flight plan pages are practiced during the first leg. The PT will plan and conduct a normal descent and pattern transition with a maximum performance landing to a full stop, including actual or simulated "Land and Hold Short Operations (LAHSO)."

Leg 2
A maximum performance takeoff is performed with a manual constant-rate climb and transition to cruise. Cruise procedures and flight plan modification are practiced on this phase of the scenario with a visual descent and transition into an airport within Class C airspace. The PT will execute an autopilot assisted GPS approach, followed with a hand flown missed approach and vectors for a coupled ILS approach and landing to a full-stop.

Leg 3
The PT will perform a normal takeoff with an autopilot-assisted climb out and transition to cruise. The PT will practice use of the avionics system and will be introduced into elementary emergencies during cruise. At some point during this phase of the scenario the PT will plan to demonstrate power on and power off stall recognition and recovery, and recovery from unusual attitudes. In addition, the PT will practice an engine failure procedure. The descent and transition into the traffic pattern will include a runway change with a crosswind landing to a full stop.

Leg 4
The PT will perform an aborted takeoff followed by a high performance takeoff to be selected by the CFI with an autopilot assisted climb and transition to cruise. The CFI will select GPS and avionics procedures to be practiced enroute. The PT will perform a VNAV descent and will execute a manual VOR/GPS approach to a landing.

Postflight
The PT will perform all aircraft shutdown and securing procedures. Instructor will provide feedback and planning data for the next flight.

Scenario Two

(note: these activities will be completed as part of the training scenario and are not intended to be a list of training tasks to be completed in numerical order)

Scenario Activities	*Scenario Sub Activities*	*Desired PT Scenario Outcome*
Flight Planning	1. Scenario Planning 2. Weight and Balance and Aircraft Performance Calculations 3. Preflight SRM Briefing 4. Decision Making and Risk Management	1. Explain 2. Explain 3. Explain 4. Explain
Normal Preflight and Cockpit Procedures	1. External Inspection 2. Internal Inspection 3. PFD/MFD/GPS/Autopilot Programming 4. SRM	1. Perform 2. Perform 3. Practice 4. Explain
Powerplant Start	1. Normal 2. External Power 3. Flooded Start 4. Hot Start	1. Perform 2. N/A 3. Discuss 4. Practice
Start Malfunctions	1. Low Oil Pressure 2. Starter Engaged	1. Describe 2. N/A
Taxiing	1. Flight Instruments 2. SRM	1. Explain 2. Explain
Before Takeoff Checks	1. Alternators 2. Magnetos 3. Propellers 4. Trim/Autopilot 5. Pressurization 6. Ice Protection 7. Avionics Setup 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Explain
Takeoff	1. Normal/Visual 2. Instrument 3. Aborted Takeoff 4. Crosswind 5. Maximum Performance 6. Instrument Departure Procedure (DP) 7. SRM	1. Perform 2. Practice 3. Practice 4. Perform 5. Practice 6. Practice 7. Explain
Climb Procedures	1. Automated climb 2. Manual climb 3. Navigation Programming 4. Power Management 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Explain
Cruise Procedures	1. Fuel Management 2. Best Economy vs. Best Power 3. Manual Cruise 4. Autopilot Cruise 5. Navigation Programming 6. Automated navigation leg 7. SRM	1. Perform 2. Explain 3. Perform 4. Perform 5. Perform 6. Perform 7. Explain
Control Performance Instrument/Visual Crosscheck	1. Straight and Level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns	1. Perform 2. Perform 3. Perform 4. Perform
Low Speed Envelope	1. Configuration Changes	1. Perform

	2. Slow Flight 3. Approach to Stalls 4. Recovery from Autopilot Induced Stalls 5. SRM	2. Perform 3. Perform 4. Practice 5. Explain
Descent Planning and Execution	1. Vertical Navigation (VNAV) Planning 2. Navigation Programming 3. Manual Descent 4. Autopilot Descent 5. SRM	1. Practice 2. Perform 3. Perform 4. Perform 5. Explain
Landings	1. Before Landing Procedures 2. IFR Landing Transition 3. Normal Landing 4. Maximum Performance Landing 5. Partial Flap Landing 6. Zero Flap Landing 7. Crosswind Landing 8. Traffic Pattern 9. Balked Landing and Go-Around 10. SRM	1. Practice 2. Practice 3. Perform 4. Practice 5. N/A 6. N/A 7. Perform 8. Perform 9. Perform 10. Explain
Aircraft Shutdown and Securing Procedures	1. Aircraft Shutdown and Securing 2. Aircraft Towing, Ground Handling and Tie-down	1. Perform 2. Perform
Automated Avionics Operation and Systems Interface	1. Primary Flight Display 2. Multi Function Display-Normal Operation 3. EHSI Operation	1. Practice 2. Practice 3. Practice
Systems Management	1. Powerplant 2. Fuel 3. Electrical 4. Avionics/GPS Systems 5. Autopilot 6. Landing Gear 7. Ice Protection 8. Pressurization 9. Oxygen 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Explain
Navigation		
VOR	1. Tracking 2. Holding 3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. DME Arc 8. SRM	1. Perform 2. Practice 3. Practice 4. N/A 5. N/A 6. N/A 7. N/A 8. Describe
ILS	1. Normal/Manual 2. Single Engine 3. Autopilot Coupled Approach 4. Circling Approach 5. SRM	1. Perform 2. N/A 3. Practice 4. N/A 5. Explain
Localizer	1. Normal/Manual Approach 2. Single Engine 3. Back Course 4. Autopilot Coupled 5. Circling Approach 6. SRM	1. Perform 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A
GPS	1. Enroute 2. Holding	1. Perform 2. Practice

	3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. SRM	3. Practice 4. N/A 5. Practice 6. N/A 7. Explain
Missed Approach	1. From Precision 2. From Non-Precision 3. From Circle 4. Single Engine 5. Use of Navaids 6. SRM	1. Perform 2. Practice 3. N/A 4. N/A 5. Practice 6. Explain
Abnormal and Emergency Procedures		
Powerplant	1. Engine Fail Before Rotation 2. Engine Fail After Rotation 3. Inflight Fail/Troubleshoot 4. Engine Securing 5. Single Engine Maneuvering 6. Best Glide Speed 7. Engine Fire In Flight 8. Propeller Overspeed 9. SRM	1. Practice 2. N/A 3. Practice 4. Practice 5. Practice 6. N/A 7. N/A 8. N/A 9. Describe
Electrical	1. Alternator Fail 2. Electrical Fire 3. Battery Only Operations 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Fuel	1. Engine Driven Fuel Pump Failure 2. Crossflow 3. SRM	1. Practice 2. Practice 3. Describe
Landing Gear	1. Unsafe Gear Indication 2. Emergency Extension 3. SRM	1. N/A 2. N/A 3. N/A
Flight Controls	1. Unscheduled Trim 2. Autopilot Failure 3. Flap Malfunction 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Pressurization	1. Rapid Decompression 2. Door Seal 3. Emergency Descent 4. SRM	1. N/A 2. N/A 3. N/A 4. N/A
Flight Instruments	1. ADI Failure 2. HSI Failure 3. Airspeed Failure 4. Static System Blockage 5. Unusual Attitude Recovery 6. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. Practice 6. N/A
Avionics	1. Communication Failure 2. Glide Slope Failure 3. PFD Failure 4. MFD Failure 5. GPS Failure 6. NAV ½ Failure 7. Smoke Removal 8. Ice Protection 9. Emergency Evacuation 10. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A 8. N/A 9. N/A 10. N/A
Airmanship and Special Emphasis Items		
Airmanship	1. Aircraft Control	1. Perform

	2. Checklist/Memory Items 3. Smoothness In Handling 4. Conduct In Emergencies 5. SRM	2. Perform 3. Perform 4. Describe 5. Explain
Special Emphasis Items	1. Collision Avoidance 2. Wake Turbulence Avoidance 3. LAHSO 4. Communication Management 5. Runway Incursion Awareness 6. Windshear 7. SRM	1. Explain 2. Explain 3. Explain 4. Perform 5. Explain 6. Explain 7. Explain

LESSON 3 – Emergency Procedures

Objective

The PT will demonstrate proficiency in all critical action emergency procedures and a representative cross section of non-critical action emergency procedures described in the aircraft POH. All procedures will be conducted under IFR.

Prerequisites

1. Completion of a Worksheet on Abnormal & Emergency Procedures.
2. Completion of a written or oral progress quiz on the material to be covered.

PT Preparation

1. Review previous lessons.
2. Review the POH, Pilot's Training Manual and aircraft checklists.
3. Plan flight profile assigned by instructor.
4. Complete Personal and Weather Risk Assessment.

Briefing Items

INITIAL INTRODUCTION:

1. Weather procurement and analysis.
2. Flight profile analysis.
3. Command transfer and pre-takeoff briefing
4. Review of Personal and Weather Risk Assessment

SRM

1. Decision making, risk management
2. Automation and task management
3. Situational and CFIT awareness
4. Filing an IFR flight plan

SAFETY

1. Mid-air collision avoidance procedures.
2. Appropriate NOTAMS.
3. Airport diagrams and taxi procedures, Runway Safety Awareness.
4. Emergency procedures.

Preflight

The PT will plan the profile and perform all preflight procedures, engine start-up, avionics set-up, taxi and before-takeoff procedures. This is accomplished prior to takeoff for each leg of the flight. Runway incursions, high wind taxi situations, and abnormal indications, and corrective actions should be practiced.

Leg 1

The PT will initiate a normal takeoff and the instructor will call for an abort. The PT will taxi back and perform a high performance takeoff with an autopilot-assisted departure. The PT will perform a DP utilizing the GPS and/or MFD.

The autopilot will be disengaged in cruise and the first leg should proceed under Basic Attitude Instrument (BAI) flying conditions. In cruise the PT will execute the proper procedures for an in-flight fire emergency, and for isolated system failures. Airspeed and configuration changes will be practiced during transitions from one phase of flight to another.

The PT will plan and perform an instrument approach as appropriate (ILS or GPS) at the first airport followed with an autopilot assisted missed approach with GPS navigation to the hold and a hand-flown VOR approach to a full-stop landing.

Leg 2

The PT will perform a normal takeoff and autopilot assisted departure. In cruise the PT will perform the proper procedures for handling a significant engine power loss, control surface failures, and a complete electrical failure. The PT will plan and perform a GPS hold followed by an instrument approach (either the ILS or GPS that was not performed at the first airport of landing) at the second airport to a full-stop landing.

Leg 3

The PT will perform a normal takeoff and autopilot assisted departure. The IFR flight plan will be cancelled and the 3rd leg will proceed under VFR. The PT will perform recovery from unusual attitudes; perform the procedure for a complete engine failure, an emergency descent and a diversion to the home airport. The PT will perform a GPS assisted VFR entry into the downwind pattern with an engine failure in the pattern followed by a single engine landing to a full stop. The PT will perform a normal closed pattern takeoff followed by a 50% flap landing and a second one with a zero-flap landing.

Post flight

The PT will perform all aircraft and shutdown and securing procedures.

Scenario Three

(note: these activities will be completed as part of the training scenario and are not intended to be a list of training tasks to be completed in numerical order)

Scenario Activities	*Scenario Sub Activities*	*Desired PT Scenario Outcome*
Flight Planning	1. Scenario Planning 2. Weight and Balance and Aircraft Performance Calculations 3. Preflight SRM Briefing 4. Decision Making and Risk Management	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Manage/Decide
Normal Preflight and Cockpit Procedures	1. External Inspection 2. Internal Inspection 3. PFD/MFD/GPS/Autopilot Programming 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Powerplant Start	1. Normal 2. External Power 3. Flooded Start 4. Hot Start	1. Perform 2. Describe 3. Practice 4. Perform
Start Malfunctions	1. Low Oil Pressure 2. Starter Engaged	1. Practice 2. Describe
Taxiing	1. Flight Instruments 2. SRM	1. Manage/Decide 2. Manage/Decide
Before Takeoff Checks	1. Alternators 2. Magnetos 3. Propellers 4. Trim/Autopilot 5. Pressurization 6. Ice Protection 7. Avionics Setup 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Manage/Decide
Takeoff	1. Normal/Visual 2. Instrument 3. Aborted Takeoff 4. Crosswind 5. Maximum Performance 6. Instrument Departure Procedure (DP) 7. SRM	1. Perform 2. Perform 3. Practice 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Climb Procedures	1. Automated climb 2. Manual climb 3. Navigation Programming 4. Power Management 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Cruise Procedures	1. Fuel Management 2. Best Economy vs. Best Power 3. Manual Cruise 4. Autopilot Cruise 5. Navigation Programming 6. Automated navigation leg 7. SRM	1. Perform 2. Manage/Decide 3. Perform 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Control Performance Instrument/Visual Crosscheck	1. Straight and Level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns	1. Perform 2. Perform 3. Perform 4. Perform
Low Speed Envelope	1. Configuration Change	1. Perform

	2. Slow Flight 3. Approach to Stalls 4. Recovery from Autopilot Induced Stalls 5. SRM	2. Perform 3. Perform 4. Perform 5. Manage/Decide
Descent Planning and Execution	1. Vertical Navigation (VNAV) Planning 2. Navigation Programming 3. Manual Descent 4. Autopilot Descent 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Landings	1. Before Landing Procedures 2. IFR Landing Transition 3. Normal Landing 4. Maximum Performance Landing 5. Partial Flap Landing 6. Zero Flap Landing 7. Crosswind Landing 8. Traffic Pattern 9. Balked Landing and Go-Around 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Practice 6. Practice 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Aircraft Shutdown and Securing	1. Aircraft Shutdown and Securing 2. Aircraft Towing, Ground Handling and Tie-down	1. Perform 2. Perform
Automated Avionics Operation and Systems Interface	1. Primary Flight Display 2. Multi Function Display-Normal Operation 3. EHSI Operation	1. Perform 2. Perform 3. Perform
Systems Management	1. Powerplant 2. Fuel 3. Electrical 4. Avionics/GPS Systems 5. Autopilot 6. Landing Gear 7. Ice Protection 8. Pressurization 9. Oxygen 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Navigation		
VOR	1. Tracking 2. Holding 3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. DME Arc 8. SRM	1. Perform 2. Perform 3. Perform 4. Practice 5. Practice 6. Practice 7. Practice 8. Explain
ILS	1. Normal/Manual 2. Single Engine 3. Autopilot Coupled Approach 4. Circling Approach 5. SRM	1. Perform 2. Practice 3. Perform 4. Practice 5. Manage/Decide
Localizer	1. Normal/Manual Approach 2. Single Engine 3. Back Course 4. Autopilot Coupled 5. Circling Approach 6. SRM	1. Perform 2. Practice 3. Practice 4. Practice 5. Practice 6. Describe
GPS	1. Enroute 2. Holding	1. Perform 2. Perform

	3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. SRM	3. Perform 4. Practice 5. Perform 6. Practice 7. Manage/Decide
Missed Approach	1. From Precision 2. From Non-Precision 3. From Circle 4. Single Engine 5. Use of Navaids 6. SRM	1. Perform 2. Perform 3. Practice 4. Practice 5. Perform 6. Manage/Decide
Abnormal and Emergency Procedures		
Powerplant	1. Engine Fail Before Rotation 2. Engine Fail After Rotation 3. Inflight Fail/Troubleshoot 4. Engine Securing 5. Single Engine Maneuvering 6. Best Glide Speed 7. Engine Fire In Flight 8. Propeller Overspeed 9. SRM	1. Perform 2. Practice 3. Perform 4. Perform 5. Perform 6. Practice 7. Practice 8. Practice 9. Explain
Electrical	1. Alternator Fail 2. Electrical Fire 3. Battery Only Operations 4. SRM	1. Practice 2. Practice 3. Practice 4. Describe
Fuel	1. Engine Driven Fuel Pump Failure 2. Crossflow 3. SRM	1. Perform 2. Perform 3. Explain
Landing Gear	1. Unsafe Gear Indication 2. Emergency Extension 3. SRM	1. Practice 2. Practice 3. Describe
Flight Controls	1. Unscheduled Trim 2. Autopilot Failure 3. Flap Malfunction 4. SRM	1. Practice 2. Practice 3. Practice 4. Describe
Pressurization	1. Rapid Decompression 2. Door Seal 3. Emergency Descent 4. SRM	1. Practice 2. Practice 3. Practice 4. Describe
Flight Instruments	1. ADI Failure 2. HSI Failure 3. Airspeed Failure 4. Static System Blockage 5. Unusual Attitude Recovery 6. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. Perform 6. N/A
Avionics	1. Communication Failure 2. Glide Slope Failure 3. PFD Failure 4. MFD Failure 5. GPS Failure 6. NAV ½ Failure 7. Smoke Removal 8. Ice Protection 9. Emergency Evacuation 10. SRM	1. N/A 2. N/A 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A 8. N/A 9. N/A 10. N/A
Airmanship and Special Emphasis Items		
Airmanship	1. Aircraft Control	1. Perform

	2. Checklist/Memory Items 3. Smoothness In Handling 4. Conduct In Emergencies 5. SRM	2. Perform 3. Perform 4. Explain 5. Manage/Decide
Special Emphasis Items	1. Collision Avoidance 2. Wake Turbulence Avoidance 3. LAHSO 4. Communication Management 5. Runway Incursion Awareness 6. Windshear 7. SRM	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Perform 5. Manage/Decide 6. Manage/Decide 7. Manage/Decide

LESSON 4 – High Altitude

Objective

The PT will combine previously learned flight skills and instrument procedures as appropriate to achieve flying proficiency. High density altitude operations will be covered as well as night operations.

Prerequisites

1. Completion of a Worksheet on Abnormal & Emergency Procedures.
2. Completion of a written or oral progress Quiz on the material to be covered.

PT Preparation

1. Review previous lessons
2. Review the POH
3. Plan flight scenario
4. Personal and Weather Risk Assessment

Briefing Items

INITIAL INTRODUCTION:

1. Weather procurement and analysis.
2. Flight profile analysis.
3. Command transfer and pre-takeoff briefing
4. Review Personal and Weather Risk Assessment

SRM

1. Decision making, risk management
2. Automation/task management
3. Situational awareness
4. CFIT awareness
5. Filing an IFR flight plan

SAFETY

1. Mid-air collision avoidance procedures
2. Appropriate NOTAMS
3. Airport diagrams and taxi procedures
4. Instrument approach procedures
5. Emergency procedures
6. High altitude operations
7. Night operations

Scenario Four

(note: these activities will be completed as part of the training scenario and are not intended to be a list of training tasks to be completed in numerical order)

Scenario Activities	*Scenario Sub Activities*	*Desired PT Scenario Outcome*
Flight Planning	1. Scenario Planning 2. Weight and Balance and Aircraft Performance Calculations 3. Preflight SRM Briefing 4. Decision Making and Risk Management	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Manage/Decide
Normal Preflight and Cockpit Procedures	1. External Inspection 2. Internal Inspection 3. PFD/MFD/GPS/Autopilot Programming 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Powerplant Start	1. Normal 2. External Power 3. Flooded Start 4. Hot Start	1. Perform 2. Perform 3. Perform 4. Perform
Start Malfunctions	1. Low Oil Pressure 2. Starter Engaged	1. Perform 2. Perform
Taxiing	1. Flight Instruments 2. SRM	1. Manage/Decide 2. Manage/Decide
Before Takeoff Checks	1. Alternators 2. Magnetos 3. Propellers 4. Trim/Autopilot 5. Pressurization 6. Ice Protection 7. Avionics Setup 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Manage/Decide
Takeoff	1. Normal/Visual 2. Instrument 3. Aborted Takeoff 4. Crosswind 5. Maximum Performance 6. Instrument Departure Procedure (DP) 7. SRM	1. Perform 2. Perform 3. Practice 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Climb Procedures	1. Automated climb 2. Manual climb 3. Navigation Programming 4. Power Management 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Cruise Procedures	1. Fuel Management 2. Best Economy vs. Best Power 3. Manual Cruise 4. Autopilot Cruise 5. Navigation Programming 6. Automated navigation leg 7. SRM	1. Perform 2. Manage/Decide 3. Perform 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Control Performance Instrument/Visual Crosscheck	1. Straight and Level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns	1. Perform 2. Perform 3. Perform 4. Perform
Low Speed Envelope	1. Configuration Changes	1. Perform

	2. Slow Flight 3. Approach to Stalls 4. Recovery from Autopilot Induced Stalls 5. SRM	2. Perform 3. Perform 4. Perform 5. Manage/Decide
Descent Planning and Execution	1. Vertical Navigation (VNAV) Planning 2. Navigation Programming 3. Manual Descent 4. Autopilot Descent 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Landings	1. Before Landing Procedures 2. IFR Landing Transition 3. Normal Landing 4. Maximum Performance Landing 5. Partial Flap Landing 6. Zero Flap Landing 7. Crosswind Landing 8. Traffic Pattern 9. Balked Landing and Go-Around 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Aircraft Shutdown and Securing	1. Aircraft Shutdown and Securing 2. Aircraft Towing, Ground Handling and Tie-down	1. Perform 2. Perform
Automated Avionics Operation and Systems Interface	1. Primary Flight Display 2. Multi Function Display-Normal Operation 3. EHSI Operation	1. Perform 2. Perform 3. Perform
Systems Management	1. Powerplant 2. Fuel 3. Electrical 4. Avionics/GPS Systems 5. Autopilot 6. Landing Gear 7. Ice Protection 8. Pressurization 9. Oxygen 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Navigation		
VOR	1. Tracking 2. Holding 3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. DME Arc 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Manage/Decide
ILS	1. Normal/Manual 2. Single Engine 3. Autopilot Coupled Approach 4. Circling Approach 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Localizer	1. Normal/Manual Approach 2. Single Engine 3. Back Course 4. Autopilot Coupled 5. Circling Approach 6. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Explain
GPS	1. Enroute 2. Holding	1. Perform 2. Perform

	3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. SRM	3. Perform 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Missed Approach	1. From Precision 2. From Non-Precision 3. From Circle 4. Single Engine 5. Use of Navaids 6. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Manage/Decide
Abnormal and Emergency Procedures		
Powerplant	1. Engine Fail Before Rotation 2. Engine Fail After Rotation 3. Inflight Fail/Troubleshoot 4. Engine Securing 5. Single Engine Maneuvering 6. Best Glide Speed 7. Engine Fire In Flight 8. Propeller Overspeed 9. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Manage/Decide
Electrical	1. Alternator Fail 2. Electrical Fire 3. Battery Only Operations 4. SRM	1. Perform 2. Perform 3. Perform 4. Explain
Fuel	1. Engine Driven Fuel Pump Failure 2. Crossflow 3. SRM	1. Perform 2. Perform 3. Manage/Decide
Landing Gear	1. Unsafe Gear Indication 2. Emergency Extension 3. SRM	1. Perform 2. Perform 3. Explain
Flight Controls	1. Unscheduled Trim 2. Autopilot Failure 3. Flap Malfunction 4. SRM	1. Perform 2. Perform 3. Perform 4. Explain
Pressurization	1. Rapid Decompression 2. Door Seal 3. Emergency Descent 4. SRM	1. Perform 2. Perform 3. Perform 4. Explain
Flight Instruments	1. ADI Failure 2. HSI Failure 3. Airspeed Failure 4. Static System Blockage 5. Unusual Attitude Recovery 6. SRM	1. Practice 2. Practice 3. Practice 4. Practice 5. Perform 6. Explain
Avionics	1. Communication Failure 2. Glide Slope Failure 3. PFD Failure 4. MFD Failure 5. GPS Failure 6. NAV ½ Failure 7. Smoke Removal 8. Ice Protection 9. Emergency Evacuation 10. SRM	1. Practice 2. Practice 3. Practice 4. Practice 5. Practice 6. Practice 7. Practice 8. Practice 9. Practice 10. Explain
Airmanship and Special Emphasis Items		
Airmanship	1. Aircraft Control	1. Perform

	2. Checklist/Memory Items 3. Smoothness In Handling 4. Conduct In Emergencies 5. SRM	2. Perform 3. Perform 4. Manage/Decide 5. Manage/Decide
Special Emphasis Items	1. Collision Avoidance 2. Wake Turbulence Avoidance 3. LAHSO 4. Communication Management 5. Runway Incursion Awareness 6. Windshear 7. SRM	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Perform 5. Manage/Decide 6. Manage/Decide 7. Manage/Decide

LESSON 5 – Bringing It All Together

Objective

The PT will demonstrate the knowledge and skill level appropriate and demonstrate judgment, aeronautical decision making skills and single pilot management skills to effectively, efficiently, and safely operate a technically advanced aircraft in an actual cross-country exercise. The training flight will be conducted under simulated IFR conditions and actual VFR conditions.

Prerequisites

Successful completion of Lesson 4

PT Preparation

1. Review previous lessons
2. Review the POH
3. Plan flight profile using the maneuvers and procedures listed in the course syllabus
4. Complete Personal and Weather Risk Assessment

Briefing Items

INITIAL INTRODUCTION

1. Weather data procurement and analysis
2. Pilot in Command responsibilities
3. Review Personal and Weather Risk Assessment

SRM

1. Decision making, risk management
2. Automation/task management
3. Situational awareness
4. CFIT awareness
5. Use of flight plan

SAFETY

1. Mid-air collision avoidance procedures
2. Appropriate NOTAMS
3. Airport diagrams and taxi procedures
4. Instrument approach procedures
5. Emergency procedures

Scenario Five

(note: these activities will be completed as part of the training scenario and are not intended to be a list of training tasks to be completed in numerical order)

Scenario Activities	*Scenario Sub Activities*	*Desired PT Scenario Outcome*
Flight Planning	1. Scenario Planning 2. Weight and Balance and Aircraft Performance Calculations 3. Preflight SRM Briefing 4. Decision Making and Risk Management	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Manage/Decide
Normal Preflight and Cockpit Procedures	1. External Inspection 2. Internal Inspection 3. PFD/MFD/GPS/Autopilot Programming 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Powerplant Start	1. Normal 2. External Power 3. Flooded Start 4. Hot Start	1. Perform 2. Perform 3. Perform 4. Perform
Start Malfunctions	1. Low Oil Pressure 2. Starter Engaged	1. Perform 2. Perform
Taxiing	1. Flight Instruments 2. SRM	1. Manage/Decide 2. Manage/Decide
Before Takeoff Checks	1. Alternators 2. Magnetos 3. Propellers 4. Trim/Autopilot 5. Pressurization 6. Ice Protection 7. Avionics Setup 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Manage/Decide
Takeoff	1. Normal/Visual 2. Instrument 3. Aborted Takeoff 4. Crosswind 5. Maximum Performance 6. Instrument Departure Procedure (DP) 7. SRM	1. Perform 2. Perform 3. Practice 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Climb Procedures	1. Automated climb 2. Manual climb 3. Navigation Programming 4. Power Management 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Cruise Procedures	1. Fuel Management 2. Best Economy vs. Best Power 3. Manual Cruise 4. Autopilot Cruise 5. Navigation Programming 6. Automated navigation leg 7. SRM	1. Perform 2. Manage/Decide 3. Perform 4. Perform 5. Perform 6. Perform 7. Manage/Decide
Control Performance Instrument/Visual Crosscheck	1. Straight and Level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns	1. Perform 2. Perform 3. Perform 4. Perform
Low Speed Envelop	1. Configuration Changes	1. Perform

	2. Slow Flight 3. Approach to Stalls 4. Recovery from Autopilot Induced Stalls 5. SRM	2. Perform 3. Perform 4. Perform 5. Manage/Decide
Descent Planning and Execution	1. Vertical Navigation (VNAV) Planning 2. Navigation Programming 3. Manual Descent 4. Autopilot Descent 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Decide
Landings	1. Before Landing Procedures 2. IFR Landing Transition 3. Normal Landing 4. Maximum Performance Landing 5. Partial Flap Landing 6. Zero Flap Landing 7. Crosswind Landing 8. Traffic Pattern 9. Balked Landing and Go-Around 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Aircraft Shutdown and Securing	1. Aircraft Shutdown and Securing 2. Aircraft Towing, Ground Handling and Tie-down	1. Perform 2. Perform
Automated Avionics Operation and Systems Interface	1. Primary Flight Display 2. Multi Function Display-Normal Operation 3. EHSI Operation	1. Perform 2. Perform 3. Perform
Systems Management	1. Powerplant 2. Fuel 3. Electrical 4. Avionics/GPS Systems 5. Autopilot 6. Landing Gear 7. Ice Protection 8. Pressurization 9. Oxygen 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Navigation		
VOR	1. Tracking 2. Holding 3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. DME Arc 8. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Manage/Describe
ILS	1. Normal/Manual 2. Single Engine 3. Autopilot Coupled Approach 4. Circling Approach 5. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Manage/Describe
Localizer	1. Normal/Manual Approach 2. Single Engine 3. Back Course 4. Autopilot Coupled 5. Circling Approach 6. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Manage/Describe
GPS	1. Enroute 2. Holding	1. Perform 2. Perform

	3. Normal/Manual Approach 4. Single Engine Approach 5. Autopilot Coupled Approach 6. Circling Approach 7. SRM	3. Perform 4. Perform 5. Perform 6. Perform 7. Manage/Describe
Missed Approach	1. From Precision 2. From Non-Precision 3. From Circle 4. Single Engine 5. Use of Navaids 6. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Manage/Decide
Abnormal and Emergency Procedures		
Powerplant	1. Engine Fail Before Rotation 2. Engine Fail After Rotation 3. Inflight Fail/Troubleshoot 4. Engine Securing 5. Single Engine Maneuvering 6. Best Glide Speed 7. Engine Fire In Flight 8. Propeller Overspeed 9. SRM	1. Perform 2. Practice 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Manage/Decide
Electrical	1. Alternator Fail 2. Electrical Fire 3. Battery Only Operations 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Fuel	1. Engine Driven Fuel Pump Failure 2. Crossflow 3. SRM	1. Perform 2. Perform 3. Manage/Decide
Landing Gear	1. Unsafe Gear Indication 2. Emergency Extension 3. SRM	1. Perform 2. Perform 3. Manage/Decide
Flight Controls	1. Unscheduled Trim 2. Autopilot Failure 3. Flap Malfunction 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Pressurization	1. Rapid Decompression 2. Door Seal 3. Emergency Descent 4. SRM	1. Perform 2. Perform 3. Perform 4. Manage/Decide
Flight Instruments	1. ADI Failure 2. HSI Failure 3. Airspeed Failure 4. Static System Blockage 5. Unusual Attitude Recovery 6. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Manage/Decide
Avionics	1. Communication Failure 2. Glide Slope Failure 3. PFD Failure 4. MFD Failure 5. GPS Failure 6. NAV ½ Failure 7. Smoke Removal 8. Ice Protection 9. Emergency Evacuation 10. SRM	1. Perform 2. Perform 3. Perform 4. Perform 5. Perform 6. Perform 7. Perform 8. Perform 9. Perform 10. Manage/Decide
Airmanship and Special Emphasis Items		
Airmanship	1. Aircraft Control	1. Perform

	2. Checklist/Memory Items 3. Smoothness In Handling 4. Conduct In Emergencies 5. SRM	2. Perform 3. Perform 4. Manage/Decide 5. Manage/Decide
Special Emphasis Items	1. Collision Avoidance 2. Wake Turbulence Avoidance 3. LAHSO 4. Communication Management 5. Runway Incursion Awareness 6. Windshear 7. SRM	1. Manage/Decide 2. Manage/Decide 3. Manage/Decide 4. Perform 5. Manage/Decide 6. Manage/Decide 7. Manage/Decide

Section 6 - FITS Master Learning Outcomes List

TAA-01: Single Pilot Resource Management (SRM)		
Objective – Demonstrates safe and efficient operations by adequately managing all available resources.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Task Management (TM)	Note: All tasks under SRM will be embedded into the curriculum and the training will occur selectively during all phases of training. SRM will be graded as it occurs during the training scenario syllabus.	Prioritize and select the most appropriate tasks (or series of tasks) to ensure successful completion of the training scenario
2. Automation Management (AM)		Program and utilize the most appropriate and useful modes of cockpit automation to ensure successful completion of the training scenario
3. Risk Management (RM) and Aeronautical Decision Making (ADM)		Consistently make informed decisions in a timely manner based on the task at hand and a thorough knowledge and use of all available resources.
4. Situational Awareness (SA)		Be aware of all factors such as traffic, weather, fuel state, aircraft mechanical condition, and pilot fatigue level that may have an impact on the successful completion of the training scenario.
5. Controlled Flight Into Terrain (CFIT) Awareness		a. Understand, describe, and apply techniques to avoid CFIT encounters: i. During inadvertent encounters with Instrument meteorological Conditions during VFR flight ii. During system and navigation failures and physiological incidents during IFR flight

TAA-02: Flight Planning		
Objective – Develop thorough and successful preflight habit patterns for flight planning, performance, weight and balance, and normal and emergency single pilot resource management and risk assessment		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Flight Training Scenario Planning	Preflight Planning	a. Review the required elements of the appropriate flight training scenario b. Decide on the optimum route and sequence of events to accomplish all required tasks c. Obtain all required charts and documents d. Obtain and analyze an FAA approved weather briefing appropriate to the scenario to be flown e. File a flight plan (VFR/IFR) for the scenario to be flown
2. Weight and Balance and Aircraft Performance Computation	a. Classroom training b. Preflight planning	Perform weight and balance and performance computations for the specific training scenario to be flown without error
3. Preflight SRM Briefing	Preflight planning	a. Orally review in specific terms all aspects of the flight scenario b. Identify possible emergency and abnormal procedures relevant to the scenario and describe successful SRM strategies to deal with them.
4. Decision Making and Risk Management	a. Pre-Arrival e Learning b. Classroom Training c. All phases of flight planning and flight	a. Make sound decisions based on a logical analysis of factual information, aircraft capability, and pilot experience and skill b. Continuously critique the success of the flight scenario c. Adjust the training scenario to maintain flight safety at all times.

TAA-03: Normal Preflight & Cockpit Procedures		
Objective – Aircraft familiarization, checklists, cockpit procedures and PFD/GPS/MFD and autopilot operation.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Normal Pre-takeoff Checklist procedures	a. Pre-arrival – eLearning b. Pre-flight briefing c. Actual aircraft pre-flight	a. Perform normal exterior inspection by reference to the written checklist. b. Perform normal interior preflight inspection, engine start, taxi, before takeoff checklists by reference to the MFD c. Perform all checklists in the proper sequence and without error
2. PFD/MFD/GPS Autopilot Programming	a. Pre-arrival – eLearning b. Pre-flight briefing c. Actual aircraft pre-flight	a. Perform PFD/AHRS initialization b. Perform autopilot pre-flight checks c. Program all the GPS and MFD according to the ADAM A500POH for the specific training scenario to be flown.

TAA-04: Engine Start and Taxi Procedures		
Objective – Demonstrate the proper Engine Start and taxi procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Engine Start	a. Pre-arrival – eLearning b. Actual aircraft pre-flight	a. Demonstrate the correct procedures for engine start under all conditions b. Demonstrate the correct emergency procedures associated with engine start. c. Successfully start the engine
2. Taxi	a. Pre-arrival – eLearning b. Actual aircraft pre-flight	a. Understand the proper technique to control the aircraft using differential braking and power b. Successfully taxi the aircraft
3. SRM/Situational Awareness	a. Pre-arrival – eLearning b. Pre-flight briefing c. Actual aircraft pre-flight	a. Understand the capability of the MFD/GPS to aid in low visibility/congested airport taxi situations b. Demonstrate the proper visual clearing techniques during all taxi operations

TAA-05: Before Takeoff Checks		
Objective – Demonstrate the proper pre-takeoff procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Normal and Abnormal Indications	a. Pre-arrival – eLearning b. Actual aircraft pre-flight	a. Complete all Pre- Takeoff checklist items correctly and in the proper sequence b. Identify normal and abnormal systems indications using the MFD and the POH
2. Aircraft Automation Management	a. Pre-arrival – eLearning b. Actual aircraft pre-flight	Correctly configure and program the PFD /MFD /HSI /GPS /Autopilot for the departure
1. Aeronautical Decision Making/Risk Management		Make the correct go / no-go decision based on the status of the aircraft, pilot, and the weather

TAA-06: Takeoff		
Objective – Demonstrate the proper takeoff procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Normal takeoff	a. Pre-Flight briefing b. In-Flight from lineup on the runway through flap reduction	Perform a normal takeoff within the PTS standards
2. Crosswind takeoff		Perform a crosswind takeoff within the PTS standards.
3. Aborted takeoff		Perform the aborted takeoff procedure within the PTS standard.
4. Soft Field/Short field Takeoff		Perform a Soft Field/Short Field Takeoff within the PTS standards
5.Situational Awareness		a. Identify traffic, systems failures, and other developing situations that might prompt the performance of an aborted takeoff. b. Verbalize and prioritize those situations present during any given takeoff
6.Aeronautical Decision Making/Risk management		Decide to continue or abort any given takeoff based on the actual situation or a simulated scenario created by the instructor.

TAA-07: Climb Procedures		
Objective – Demonstrate the proper climb procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Manual Climb	a. Pre-Flight briefing b. In-Flight from flap retraction until after initial level-off at cruise altitude	a. Perform a hand flown climb and level-off within the PTS standards b. Establishes pitch within the PTS standards
2. Autopilot Climb		a. Perform an autopilot flown climb and level-off within the PTS standards b. Establishes pitch attitude within the PTS standards
3. Navigation Programming		Program the GPS/MFD to comply with the flight planned course and all ATC clearances
4. Power management		Set appropriate power/engine leaning settings by reference to the MFD
5. Situational Awareness, Task Management, and Decision Making		a. Identify all traffic, hazardous terrain, and potentially hazardous situation as they occur by reference to visual clearing and the MFD (if available and optioned) b. Perform all required in-cockpit tasks in such a manner that visual clearing is not impacted negatively c. Make timely decisions based on information obtained, visually, by radio, or by aircraft automation equipment.

TAA-08: Cruise procedures		
Objective – Demonstrate the proper cruise procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Lean Assist MFD 2. Best Power vs. Best Economy	a. Pre-arrival – eLearning b. In Cruise Flight	a. Lean the engines using the Lean Assist procedures and the MFD, unless FADEC equipped
3. Manual Cruise	In Cruise Flight	a. Perform hand flown manual cruise within the PTS standards b. Maintains altitude, within the PTS standards
4. Autopilot Cruise		a. Perform an autopilot assisted cruise within the PTS standards (for manual cruise) b. Maintains altitude within the PTS standards c. Demonstrate the aircraft reaction to course changes programmed into the GPS/MFD
5. Navigation Programming		Program flight plan changes into the GPS.
6. Automated Navigation Leg		a. In VFR conditions conduct a navigation leg of 30 minutes or more to a different airfield by use of the autopilot beginning at 1,000 ft AGL on departure and terminating autopilot use just prior to entry to the VFR pattern. b. In IFR conditions (or simulated IFR) conduct a navigation leg of 30 minutes or more to a different airfield by use of the autopilot beginning at 500 ft AGL on departure and terminating autopilot use at the decision altitude or missed approach point as applicable. If a missed approach is flown it will be flown by use of the autopilot.

7. Task Management, Situational Awareness, and Decision making		terrain, and potentially hazardous situation as they occur by reference to visual clearing and the MFD (if available and optioned) b. Perform all required in-cockpit tasks in such a manner that visual clearing is not impacted negatively c. Make timely decisions based on information obtained, visually, by radio, or by aircraft automation equipment

TAA-09: Control Performance Instrument/Visual Crosscheck		
Objective – Demonstrate the proper use of flight controls and Visual or PFD derived cues to perform basic flight maneuvers in the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Straight and level 2. Normal Turns 3. Climbing and Descending Turns 4. Steep Turns (45 degree)	a. Pre-Flight briefing b. In Flight	a. Perform the maneuver by sole reference to the window within the PTS standard b. Perform the maneuver by sole reference to the PFD within the PTS standard c. Establishes airspeed and altitude within the PTS standard.

TAA-10: Low Speed Envelope		
Objective – Recognize the onset of low speed flight regimes and demonstrate the proper use of flight controls and Visual or PFD derived cues to perform basic low speed flight maneuvers in the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Configuration changes 2. Slow Flight	a. Pre-Flight briefing b. In Flight	Demonstrate slow flight within the PTS standard with the flaps in all possible flap positions and detents
3. Recovery From Power –Off and Power -On Stalls		a. Demonstrate a recovery from a planned Power-Off or Power-On Stall with minimum altitude loss. b. Demonstrate a recovery from an instructor induced Power-On/Power-Off stall with minimum altitude loss.
4. Recovery from autopilot induced stall		Demonstrate a recovery from an autopilot induced stall with minimum altitude loss

4. Stall Prevention, Situational Awareness, Task management, and Decision Making		that might lead to an inadvertent stall and cockpit indications that would warn of an impending stall b. Demonstrate pilot actions to avert the stall prior to its occurrence

TAA-11: Descent Planning and Execution		
Objective – Demonstrate the proper descent procedures for the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1.Automation management	a. Pre-Fight briefing b. Descent planning during the cruise leg and the descent itself from cruise altitude until just prior to flap extension for landing	a. Decide which automated features will be used during the descent and program then prior to beginning the descent b. Monitor and update the automated features during the descent
2. Vertical Navigation (VNAV) Planning		Use the descent features of the GPS and the map features of the MFD to plan a fuel efficient descent that avoids known obstacles and terrain
3. Navigation Programming		Program the entire descent (VFR) and program and activate the desired approach and go-around (IFR)
4. Manual Descent		Perform a manual descent within PTS standards
5. Autopilot Descent		Perform an autopilot descent within PTS standards (for a manual descent)
5. Task Management, Situational Awareness, CFIT Avoidance		Identify the most important data available

TAA-12: Landings		
Objective – Demonstrate landing procedures in the A500.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Before landing procedures	a. Pre-arrival – eLearning b. Pre-Flight Briefing c. In flight i. (VFR) flap extension to turning off the runway or return to pattern altitude in the event of a go-around ii. (IFR) from 1,000 feet (stabilized approach until turning off the runway or climb to missed approach altitude	Perform all pre-landing checklist items correctly and in sequence
2. IFR Landing Transition (Autopilot to manual and manual to Manual)		a. Demonstrate the proper transition from instrument reference to visual reference b. Demonstrate the proper procedures for autopilot disengagement and transition to landing
3. Normal landing		Perform a normal full flap landing within the PTS standard
4.Soft and Short Field landing		Perform Soft and Short field landings within the PTS standard
5.Partial Flap landing		Perform a partial flap landing within the PTS standard
6.Zero Flap landing		Perform a zero flap landing within the PTS standard
7.Crosswind landing		Perform a crosswind landing within the PTS standard
8.Balked landing and Go-Around		a. Make a timely decision to go-around either in flight or after initial touchdown if the landing cannot be accomplished safely b. Perform the balked landing procedure within the PTS standards
9.Decision Making and Situational Awareness		a. Demonstrate awareness of all potential weather, traffic, and airfield factors that might impact the approach and landing b. Make timely decisions to mitigate risks and ensure a successful approach and landing

TAA-13: Aircraft Shutdown and Securing procedures		
Objective – Demonstrate proficiency shutting down and securing the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Aircraft Shutdown & Securing Checklist	a. Postflight	Demonstrate proficiency properly concluding a flight including engine shutdown and securing
2. .Aircraft Towing, Ground Handling, and Tiedown		Demonstrate proficiency properly concluding a flight including aircraft storage

TAA-14: Automated Avionics Interface		
Objective – Demonstrate proficiency interfacing the avionics for flight operations		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Identification of Data/Power Sources a. Air Data failure b. AHRS failure c. Generator/battery failure	a. Pre-Arrival E learning b. Classroom c. Pre-flight d. In-flight	a. Understand data/power source failure modes that affect operation of the PFD. b. Identify specific failures and their associated cues.
2. Identification of PFD Failure Modes and corrective actions a. Invalid Sensor Data b. Invalid Heading c. Crosscheck Monitor d. Recoverable Attitude e. Invalid Attitude and Heading f. Complete/partial Electrical Power failure		Perform the appropriate corrective action for each malfunction.
3. Aircraft Automation Management		a. Understand and be able to correctly describe the interface between all the installed avionics systems in the aircraft b. Demonstrate proficiency operating the Avionics installed on the aircraft as an integrated system

TAA-15: GPS Operation and Programming		
Objective – Demonstrate proficiency with the GPS		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. VFR: Direct-To Function Nearest Function Airport Information Function Flight Plan Function	In-flight	Demonstrate proficiency using the GPS including the Direct-To, Nearest, and Airport Information functions
2. IFR: Direct-To Function Nearest Function DP/STAR/Approach Function Flight Plan Function	a. Pre-flight b. In-flight	a. Demonstrate proficiency using the GPS including the Direct-To, Nearest, Airport Information, DP/STAR/Approach functions b. Demonstrate proficiency flight planning the GPS and flying the flight plan

TAA-16: Autopilot Programming, Modes, and Annunciators		
Objective – Demonstrate proper use of the autopilot.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1.Control Wheel Steering	In-flight	Demonstrate proper use of the control wheel steering.
2.LNAV and VNAV Programming		Demonstrate proper use of the LNAV and VNAV functions of the autopilot
3.Vertical Speed and Altitude Hold		Demonstrate proper use of the vertical speed and altitude hold
4.Navigation Modes		Demonstrate proper use of the navigation modes of the autopilot
5.Coupled Approach Modes		Demonstrate proper use of the coupled approach modes of the autopilot
6.Auto trim Mode		Demonstrate proper use of the auto trim mode of the autopilot
7.PFD Interface		Demonstrate proper use of the PFD interfaces

TAA-17: Automated Avionics Operation and Systems Interface		
Objective – Demonstrate proper use of the Avionics Interface including normal, abnormal, and emergency operations of the A500 and all installed avionics.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Pilot Flight Display	a. In-flight	Demonstrate proper use of the PFD
2. Multi Function Display Normal Operation Setup Pages Navigation Modes Traffic Mode Weather Modes Checklist Modes	a. Pre-flight b. In-flight c. Post-flight	Demonstrate proper use of the avionics interface during normal operations including setup, navigation, traffic, weather, and checklist.
3. Abnormal and Emergency Indications and Operations Navigation Modes Traffic Mode Weather Modes Checklist Modes	a. Pre-flight b. In-flight c. Post-flight	Demonstrate proper use of the avionics interface during abnormal and emergency operations including setup, navigation, traffic, weather, and checklist.
4.EHSI Operation	a.Pre-flight b.In-flight	Demonstrate proper setup, use, and operation

TAA-18: Datalink Situational Awareness Systems and Additional Avionics Setup		
Objective –Demonstrate proper use of the EHSI and it's interface with other installed avionics.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Datalink Weather Setup and Operation	a. Pre-flight b. In-flight	a. Demonstrate the proper setup of the information and related displays. b. Demonstrate the proper decision making skills based on the information presented
2. Datalink Traffic Setup and Operation	a. Pre-flight b. In-flight	a. Demonstrate the proper setup of the information and related displays. b. Demonstrate the proper decision making skills based on the information presented
3. Terrain Display and Avoidance Systems Setup and Operation	a. Pre-flight b. In-flight	a. Demonstrate the proper setup of the information and related displays. b. Demonstrate the proper decision making skills based on the information presented
4. Datalink Flight Plan and Traffic Control Systems Setup and Operation	a. Pre-flight b. In-flight	a. Demonstrate the proper setup of the information and related displays. b. Demonstrate the proper decision making skills based on the information presented

TAA-19: Emergency Escape Maneuvers/ Recovery from Unusual Attitudes and Upsets		
Objective – Demonstrate unusual attitude/upset recovery in the A500		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. PFD	In-flight	Demonstrate unusual attitude recovery using the PFD to PTS Standards
2. Backup Instruments	In-flight	Demonstrate unusual attitude recovery using backup instruments to PTS Standards
3. Autopilot – Limitations of it use for recovery	a. Pre-flight b. In-flight	Demonstrate unusual attitude recovery using the autopilot to PTS Standards
4. Upset Training	In-flight	Demonstrate upset recovery using the PFD
5. Engine Failure/Emergency Descent	a. Pre-flight b. In-flight	Demonstrate procedures to be used during engine failure or situations requiring an emergency descent.
6. Emergency Escape Maneuvers, Risk management, and Decision Making	a. Pre-flight b. In-flight	a. Understand the capabilities of the PFD, Autopilot b. Develop a problem solving matrix for use of all these systems when faced with IFR/VFR emergency procedures c. Demonstrate the ability to make correct decisions when faced with IFR/VFR emergency conditions

TAA-20: Instrument Approach Procedures		
Objective – Demonstrate IFR procedure proficient in the A500 using the installed equipment.		
Performance	**Conditions**	**Standards**
The training task is:	The training is conducted during:	The pilot in training will:
1. Manual ILS	a. Pre-arrival – eLearning b. Pre-Flight Briefing c. In-Flight	Perform the approach within the PTS standards
2. Coupled ILS		Perform the approach within the PTS standards (for a manual approach)
3. Manual VOR		Perform the approach within the PTS standards
4. Manual GPS		a. Program and activate the GPS approach in a timely manner b. Perform the approach within the PTS standards
5. Coupled VOR/GPS VNAV Approach		a. Program and activate the GPS/VNAV approach in a timely manner b. Perform the GPS/VNAV approach within the PTS standards (for a manual approach)
6. Manual Missed Approach		Perform the missed approach within the PTS standards
7. Autopilot Flown missed Approach		Perform the missed approach within the PTS standards (for a manual missed approach)
8. Procedure Turn		Demonstrate Procedure to PTS Standards
9. Holding		Demonstrate Instrument Holding to PTS Standards
10. Task Management and Decision making	In-flight	Demonstrate proper planning and prioritization of time between avionics programming and execution of IFR procedures
11. Situational Awareness	In-Flight	Demonstrate proper use of the MFD and HSI to maintain situational awareness during IFR procedures

Section 7 - Flight Risk Assessment

Pilot

Factor	***VFR***	***IFR***	***Score***
Less than 100 hours in type	+2	+3	
Unfamiliar Destination	+1	+1	
Fatigue (less than normal sleep prior night)	+2	+3	
Flight at end of work day	+2	+3	
Scheduled commitment after flight	+2	+2	
Recent death of close family member	+2	+2	
Major domestic problems	+2	+2	
Illness in family	+1	+1	
Second pilot who is rated and current	-1	-1	
Alcohol within the last 24 hours	+2	+2	
Taking over the counter medications	+3	+3	
Inadequate food prior to flight	+2	+2	
Inadequate water prior to flight/no water on board	+2	+2	
Flight duration more than 3 hours	+2	+2	
Total			

Aircraft

Factor	VFR	IFR	Score
Fuel calculation completed for flight with reserves for day/night conditions	-1	-1	
Total fuel required for flight with reserves for day/night conditions less 60% of available fuel	-2	-3	
Weight and balance calculated	-1	-1	
Weight within 10% of maximum gross	+2	+2	
Takeoff or landing distance more than 50% of runway length	+2	+2	
Total			

Environment

Factor	**VFR**	**IFR**	**Score**
Visibility 3 to 5 miles	+2	0	
Visibility 1 to 3 miles	+3	0	
Destination visibility less than 1 mile	+20	+1	
Ceilings less than 3,000’ AGL	+3	0	
Destination ceilings less than 1,000’ AGL	+10	+1	
Destination ceilings less than 500’ AGL +20	+1		
Convective activity within 20 NM of flight path	+5	+3	
Convective activity/no storm scope/detection capability	+10	+3	
Convective activity with detection capability	0	-2	
Destination dew point spread less than 3°	+5	+1	
No ice protection equipment, surface temperatures less than 40°F, and low clouds or precipitation	+30	+10	
Icing forecast (AIRMET more than light) at altitude required to fly with ice protection equipment	N/A	+2	
Operational control tower at destination	-2	-2	
VASI/PAPI at destination	-1	-1	
Radar environment at destination	-1	-1	
Mountainous terrain	+3	+3	
Approach/departure over water	+1	+1	
High bird hazard	+1	+1	
Unpaved runway	+1	+1	
IFR and only approach is non-precision	N/A	+2	
Weather reporting at airport	-1	-1	
Precipitation causing obstruction to visibility	+2	+1	
Wet runway	+1	+1	
Ice on runway	+2	+2	
Crosswind 90% of max POH	+2	+2	
Using flight following/radar advisories in high density traffic areas	-1	N/A	
On IFR flight plan during VFR conditions	-1	N/A	
Total			
Grand Total			

	VFR Grand Total	**VFR Action**	**IFR Grand Total**	**IFR Action**
Minimal	Less than 6	Go	Less than 7	Go
Low	6 to 8	Consider alternate actions	7 to 10	Consider alternate actions
Medium	9 to 14	Consult experienced CFI	11 to 15	Consult experienced CFI
High	More than 14	Don’t Go	More than 15	Don’t Go